

## CLAIMS

We claim:

1. A method of determining a wireless system capacity comprising the steps of:
  - determining a reverse noise floor;
  - 5 obtaining a plurality of forward code domain measurements and corresponding reverse noise measurements; and,
  - determining a maximum number of users such that the probability of exceeding a predetermined reverse noise rise is below a threshold.
- 10 2. The method of claim 1 wherein the forward code domain measurements comprise the number of active forward links.
3. The method of claim 1 wherein the step of determining a reverse noise floor is performed by obtaining reverse noise measurements during a period of inactivity.
- 15 4. The method of claim 1 wherein the step of determining a maximum number of users includes determining reverse noise rise measurements by comparing the reverse noise measurements to the reverse noise floor.
- 20 5. The method of claim 1 wherein the forward code domain measurements and reverse noise measurements are obtained substantially simultaneously.

6. The method of claim 1 wherein the step of determining a maximum number of users includes, using measurements corresponding to those at or below a specific number of active sessions, forming a ratio of the number of measurements having an RNR below 3 decibels to the number of measurements corresponding to those at or below a specific number of active sessions, and
- 5 comparing the ratio to a confidence level.
7. The method of claim 1 wherein the plurality of forward code domain measurements are obtained from a base station transceiver.
- 10 8. The method of claim 1 wherein the forward code domain measurements include a plurality of data sets, each set having a timestamp, a plurality of code IDs, and power levels for each code ID.
9. A method of determining a wireless system capacity comprising the steps of:
- 15 modifying at least one system parameter;
- determining a reverse noise floor;
- obtaining a plurality of forward code domain measurements and corresponding reverse noise measurements; and,
- determining a maximum number of users such that the probability of exceeding a
- 20 predetermined reverse noise rise is below a threshold.
10. The method of claim 9 wherein the forward code domain measurements comprise the number of active forward links.

11. The method of claim 9 wherein the step of determining a reverse noise floor is performed by obtaining reverse noise measurements during a period of inactivity.

12. The method of claim 9 wherein the step of determining a maximum number of users includes determining reverse noise rise measurements by comparing the reverse noise measurements to the reverse noise floor.

13. The method of claim 9 wherein the forward code domain measurements and reverse noise measurements are obtained substantially simultaneously.

14. The method of claim 9 wherein the step of determining a maximum number of users includes, using measurements corresponding to those at or below a specific number of active sessions, forming a ratio of the number of measurements having an RNR below 3 decibels to the number of measurements corresponding to those at or below a specific number of active sessions, and comparing the ratio to a confidence level.

15. The method of claim 9 wherein the plurality of forward code domain measurements are obtained from a base station transceiver.

16. The method of claim 9 wherein the forward code domain measurements include a plurality of data sets, each set having a timestamp, a plurality of code IDs, and power levels for each code ID.

17. The method of claim 9 wherein the said at least one system parameter is a power control parameter.

18. The method of claim 9 wherein the said at least one system parameter is a mobile access  
5 probe parameter.